

The background of the slide shows several large stacks of light-colored lumber, likely pine or spruce, arranged in a warehouse or outdoor storage yard. The stacks are tall and rectangular, with metal straps visible across them. The sky is clear and blue, and the ground is a light-colored concrete or asphalt surface. The text is overlaid on the center of the image.

Clean & Bright Lumber

Running a Successful Program

Paul Merrick

Controlling Mold & Sapstain in Logs & Lumber Seminar

Oregon State University

April 15, 2014

Overview

- Brief review of 2011 talk - *Domestic Expectations for Lumber Quality*
- Broadly discuss the key elements of a successful mold & sapstain control program for producers
 - including supplier & customer roles





Domestic Expectations for Lumber Quality (2011 Workshop)

- The presentation handout can be found here:

<http://owic.oregonstate.edu/sites/default/files/sapstain/harms.pdf>

- The presentation video can be found here:

<https://media.oregonstate.edu/search/searchkeyword/steve%20harms%202011>

Key points from Steve's talk ...

- Public (homeowner) perception shaped by high profile claims & litigation
 - Family health and safety
- Homeowner is more engaged in building process – will visit job site during framing process
- DIY consumers and remodel contractors will pick through units
- Builders are wary of mold/stained lumber attracting additional inspections
- For lumber dealers, reputation for quality is critical
 - Contractors will shop elsewhere
 - Returns are costly
- For big box retailers lumber is a lead-in product
 - High traffic for lumber leads to increased sales of tools, etc.
- Logistics for producer
 - Time to market – understand
 - Packaging – improve / change
 - Inventory rotation – actively manage

A Successful Clean & Bright Program requires...

- Partnership
- Understanding the challenge
- Product (manufacturing) Standard
 - Supported by a QA Program
- Commitment to continuous improvement

Partnership...

Lumber Producer

- Management support
- QA program & product standard
- Training & Ownership
- Mill to mill communication
- Market (customer) intelligence

Chemical Supplier

- Service & Training
- Regulatory Compliance
- Understanding of market needs
- Innovation

Lumber Dealer

- Communication
- proper inventory rotation
- proper inventory storage
- Commitment to improvement

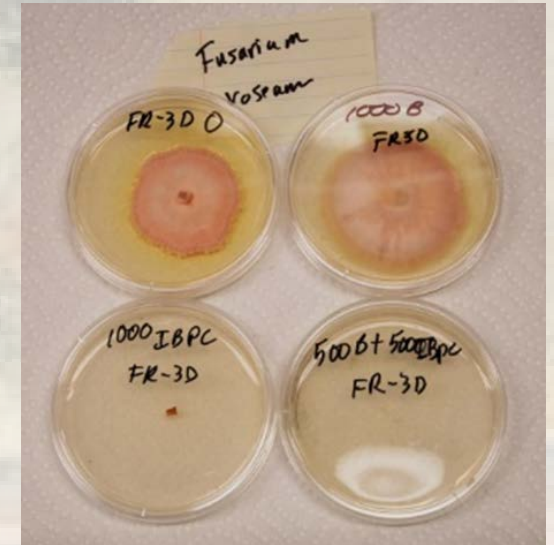
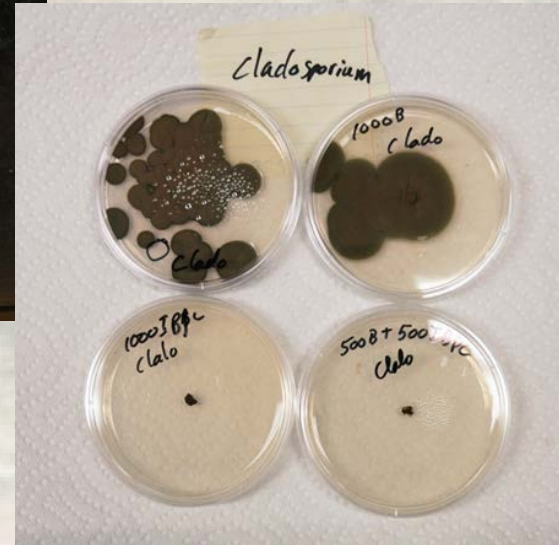
Understand the challenge...

Identify your specific challenges

- Sapstain or mold
 - Which are you dealing with?
- Know when they appear
 - Age of inventory influence
 - Seasonal influence
- Dirt & iron stain?
 - Are you doing what you can to control?
- Log Quality
 - Age & type
 - Can you influence / control?
- Cost effective treatment options
 - short term
 - long term
 - which of these do you need?

Which stains & molds?

- Collect, isolate, identify & test
- Understand when different species show up in the inventory timeline – is there a seasonality component?
- Read the literature
- Utilize resources such as Universities

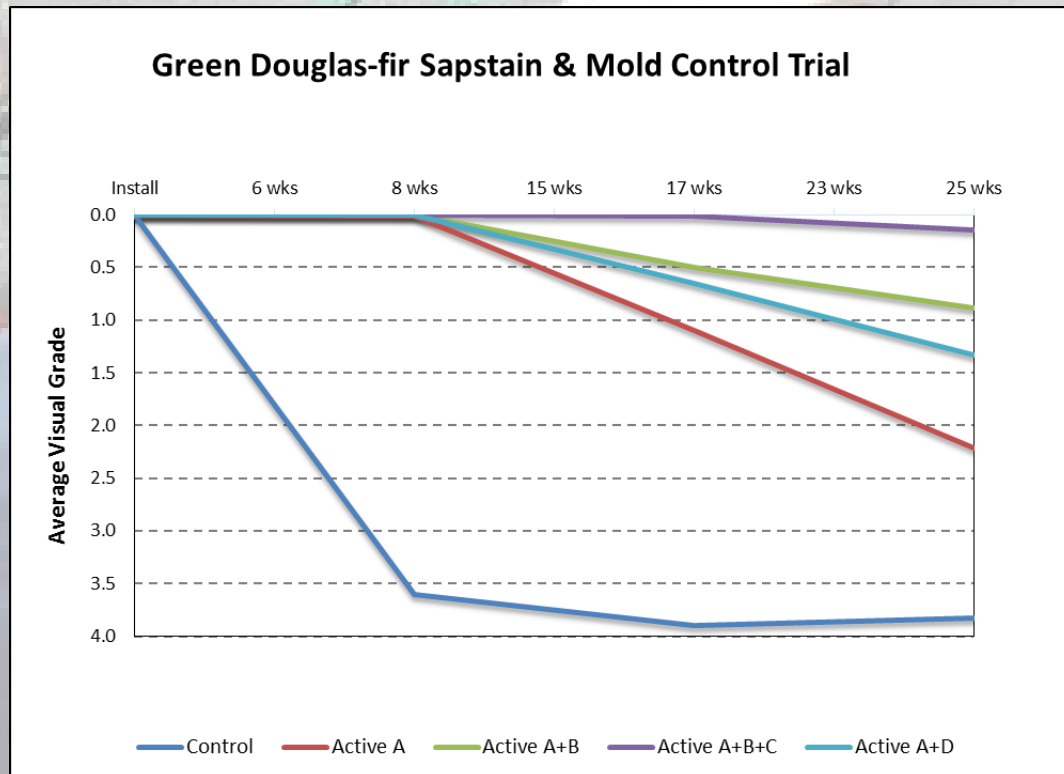


Which formulation, what retention?

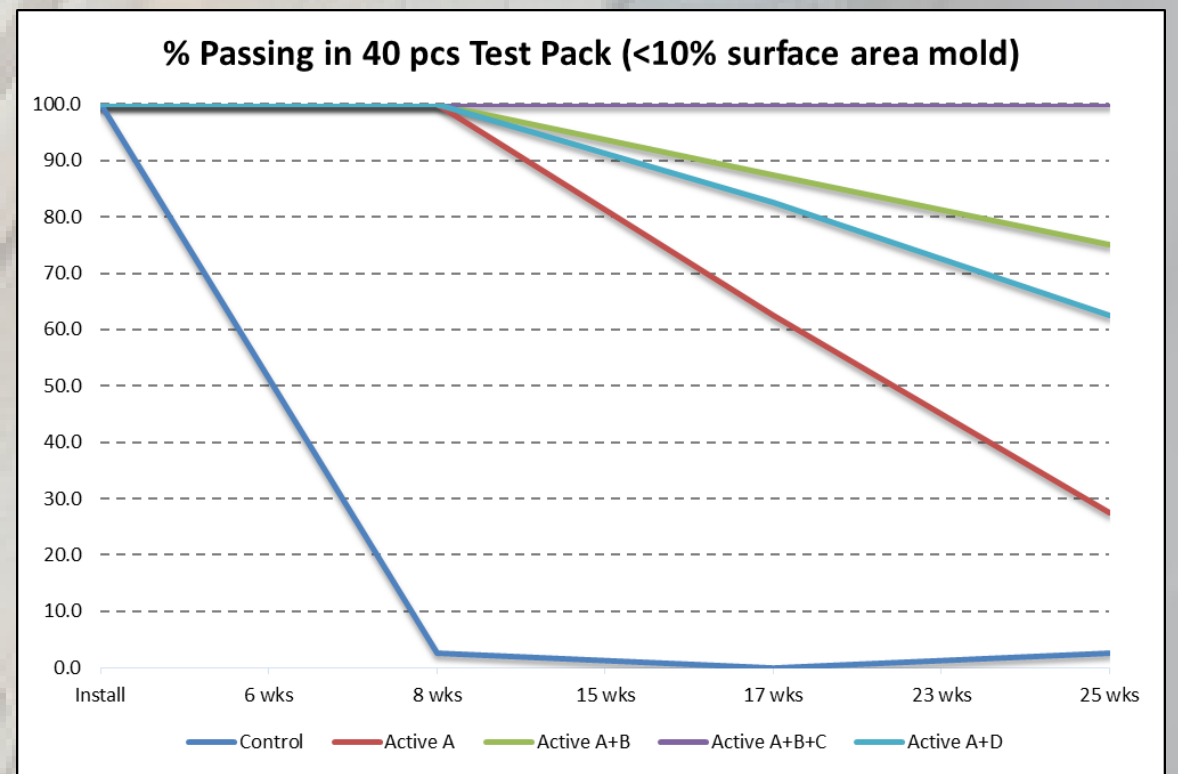
- As producers, actively test, define & decide
 - AWPA Standard E24 (humidity chamber)
 - AWPA Standard E29 (and variations)
- Dose response trials – single formulation / varied retention
 - How long does protection last?
 - What is estimated cost?
 - Model cost-performance
- Formulation comparison trials
 - Look at different combinations of actives (single or multi vendor)
 - What combination provides acceptable cost effective protection?
 - You should test enough combinations so you have a choice
 - Repeat testing to confirm results – tote trial / test market

Evaluate your data...

Average Visual Grade Chart



% Passing Charts



Product (manufacturing) Standards...

Quality Assurance Programs ...

Standard Operating Procedures
& Job Instructions ...

Product (manufacturing) Standard...

PRODUCT STANDARD

SAPSTAIN AND SURFACE MOLD
PROTECTION SPECIFICATION
FOR GREEN DOUGLAS-FIR LUMBER

ORIGINAL DATE: _____
REVISION DATE: _____

APPROVED BY: _____

- CONFIDENTIAL -
THIS PRODUCT STANDARD CONTAINS PROPRIETARY
& CONFIDENTIAL INFORMATION

- The “what you will do” document
- Provides for accountability /ownership
- Is a living document

Manufacturing Standard Topics...

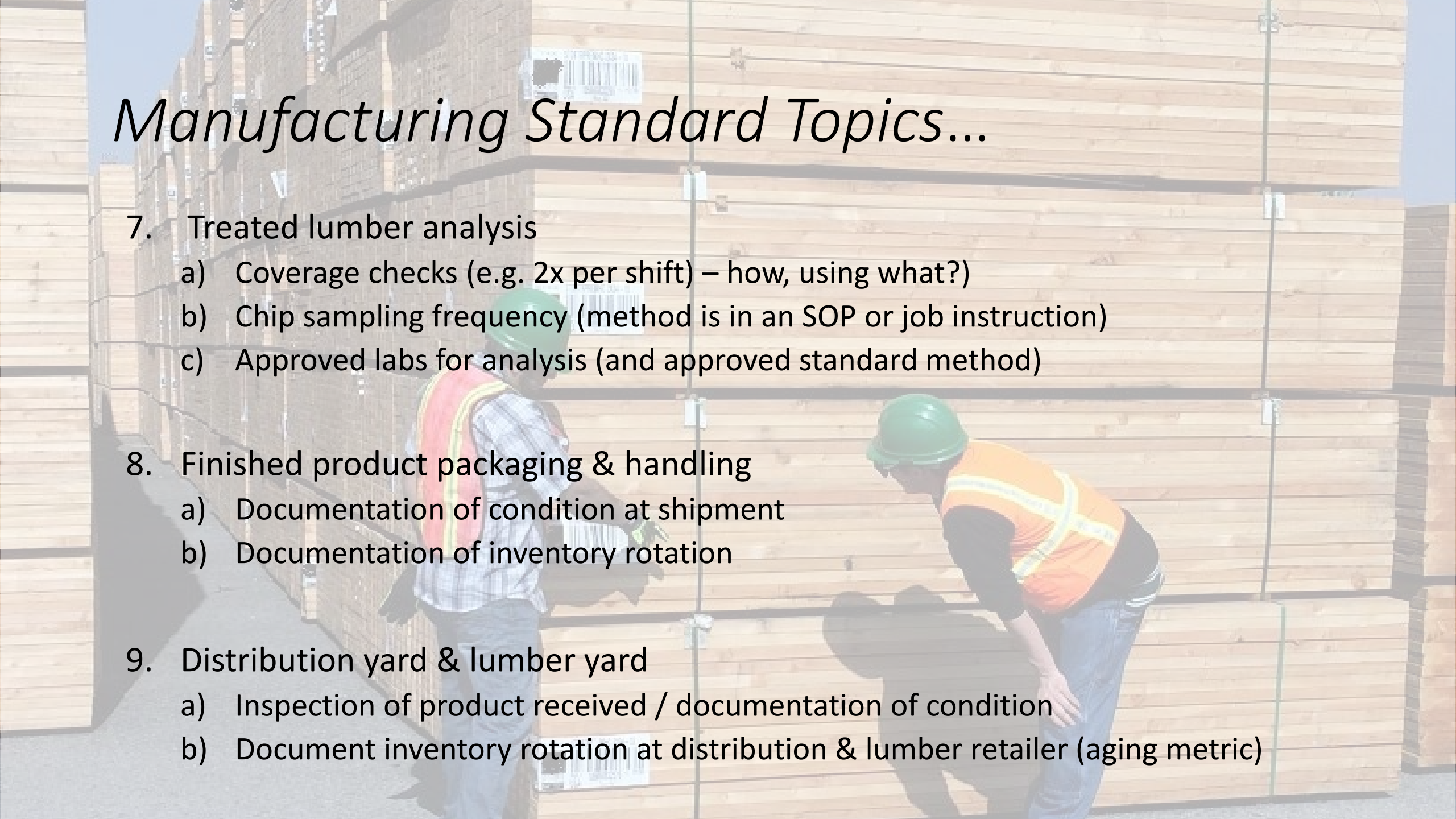
1. A scope & objective statement
2. Statement covering locations/ facilities (jurisdiction)
3. Statement covering product (species, grade, etc.)
4. In-bound raw material
 - a) Logs - Quality specification, storage & handling
 - b) Approved formulations & additives (actives, retentions)
 - c) Approval process procedure(s) reference
 - d) Storage & handling of concentrate totes

Manufacturing Standard Topics...

5. Work (treating) solution preparation
 - a) Reference to manufacturer directions for use
 - b) Solution strength analysis frequency (method is in an SOP or other std.)
 - c) List of approved labs for analysis
 - d) Record keeping (log book – details, items that will help you solve a problem)
 - e) Details surrounding mix room maintenance

6. Spray Application Process
 - a) Cleaning & maintenance (what & when, SOP's cover the how)
 - i. Such as filter types and replacement schedules
 - b) Nozzle specifications (type approved, ref. to method for approving)
 - c) Set points / ranges for flow & pressure (with ref. to method for approving)
 - d) Handling of over-spray return

Manufacturing Standard Topics...

The background of the slide is a photograph of a lumber yard. In the foreground, two workers wearing hard hats and safety vests are inspecting a large stack of lumber. One worker is standing and looking at a stack, while the other is bent over, examining a piece of wood. The stacks of lumber are organized in neat rows, and the scene is brightly lit, suggesting an outdoor or well-lit industrial setting.

7. Treated lumber analysis

- a) Coverage checks (e.g. 2x per shift) – how, using what?)
- b) Chip sampling frequency (method is in an SOP or job instruction)
- c) Approved labs for analysis (and approved standard method)

8. Finished product packaging & handling

- a) Documentation of condition at shipment
- b) Documentation of inventory rotation

9. Distribution yard & lumber yard

- a) Inspection of product received / documentation of condition
- b) Document inventory rotation at distribution & lumber retailer (aging metric)

Quality Program...

“How you will do it & who will do it”

- By reference it's in /part of the Manufacturing Standard
- Contains the SOP's & JIS's
- Start to finish process control
 - What you measure / document
 - Frequency of measurement
 - How you measure it (physically, analytically)
 - What you do with results (pass / fail)
 - How you deal with non-conformance (corrective action)

Who's a member of the QA program?

A worker wearing a yellow safety vest and blue gloves is working in a warehouse. The worker is positioned behind a large, dark metal bin. In the background, there are several wooden pallets and stacks of materials. The scene is dimly lit, with the worker's vest and gloves providing a strong contrast.

Continuous Improvement

Now that you're good, how do you get better?

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